# ITTC FILE COPY

10 1040 507	OCUMENTATION PAGE				Form Approved OMB No. 0704-0188
AD-A216 567		16. RESTRICTIVE MARKINGS			
	***	3 DISTRIBUTION	/AVAILABILITY C	F REPORT	
2b. DECLASSIFICATION / DOWNGRADING SCHEDULE		UNLIMITED			
4. PERFORMING ORGANIZATION REPORT NUMBER(S)		5. MONITORING ORGANIZATION REPORT NUMBER(S)			
DOD POP TR/AYD 89-001				1	TE
6a. NAME OF PERFORMING ORGANIZATION  6b. OFFICE SYMBOL  (If applicable)		7a. NAME OF MONITORING ORGANIZATION EL 1990			
Packaging Division, AED SMCAR-AEP		7a. NAME OF MONITORING ORGANIZATION FLET 1990			
6c. ADDRESS (City, State, and ZIP Code) U.S. Army ARDEC		7b. ADDRESS (City, State, and ZIP Code)			
Picatinny Arsenal, NJ 07806-5	5000				
8a. NAME OF FUNDING/SPONSORING ORGANIZATION	8b. OFFICE SYMBOL (If applicable)	9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER N/A			
8c. ADDRESS (City, State, and ZIP Code)		10. SOURCE OF FUNDING NUMBERS			
		PROGRAM ELEMENT NO.	PROJECT NO.	TASK NO.	WORK UNIT ACCESSION NO.
11. TITLE (Include Security Classification) Performance Oriented Packaging Ammunition Box, 2 Boxes per Wi 12. PERSONAL AUTHOR(S) William Healy	rebound Box.				
13a. TYPE OF REPORT 13b. TIME CO	14. DATE OF REPORT (Year, Month, Day) 15. PAGE COUNT 89-04-12				
16. SUPPLEMENTARY NOTATION See attached				_	
17. COSATI CODES FIELD GROUP SUB-GROUP		Continue on reverse if necessary and identify by block number) riented Packaging (POP); M86 APERS Mine; PDM; mmunition Container; Wirebound Box			
This report contains the testing 12 per PA19 metal ammunition cor Oriented Packaging certification of Tachnology (Report No. DOD POwere loaded with 35 lbs. of lead dropped 1.2 meters in 5 configurations boxes were also compression load No damage was observed to the boxes.	ntainer, two PAI n. In addition, DP Hm/JWG/TR 870 I shot and packa cations; top, bo led to 1296 lbs.	9's per wire tests were 05) in which ged two per ttom, long s to satisfy	bound box f conducted a steel ammu wirebound b ide, short a 3 meter h	or Perfort Rochest nition coox. Boxe side, corigh stack	mance ter Institute ontainers es were tners. The ting test.
20. DISTRIBUTION AVAILABILITY OF ABSTRACT  \[ \begin{align*} \begin{align*} \text{STRIBUTION AVAILABILITY OF ABSTRACT } \\ \begin{align*} \text{STRIBUTION AVAILABILITY OF ABSTRACT } \\ \begin{align*} \text{STRIBUTION AVAILABILITY OF ABSTRACT } \\ \begin{align*} \begin{align*} \text{STRIBUTION AVAILABILITY OF ABSTRACT } \\ \begin{align*} \text{STRIBUTION AVAILABILITY OF ABSTRACT } \\ \begin{align*} \text{STRIBUTION AVAILABILITY OF ABSTRACT } \\ \begin{align*} \begin{align*} \text{STRIBUTION AVAILABILITY OF ABSTRACT } \\ \ext{STRIBUTION AVAILABILITY OF ABSTRACT } \\ STRIBUTION AVAILABILITY	21. ABSTRACT SECURITY CLASSIFICATION UNCLASSIFIED  22b. TELEPHONE (Include Area Code)   22c. OFFICE SYMBOL				
Steve Ruffini		(201) $724-2$		SMCAR-	
DD Form 1473, JUN 86	Previous editions are	obsolete.	SECURITY	CLASSIFICATI	ON OF THIS PAGE

90 01 02 0 2 1

### 1. DATA SHEET:

## Container:

Type: Box

UN Code: 4C

Specification Number: PPP-B-46506

Material: Wood and wire Capacity: 1167.9 CU. IN

Dimensions: I.D. Inches - 12 1/2 x 12 1/16 x 10 3/8

Tolerance: + 1/8

Closure (Method/Type): Bent wire

Tare Weight: 4.4 lbs.

#### Product:

Name: Mine, APERS, M86

Drawing Number:

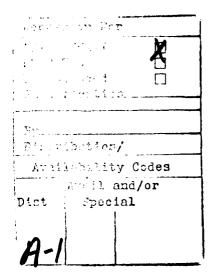
United Nations Number:

United Nations Packing Group:

Physical State: Solid

Amount Per Container: 24





# 2. BACKGROUND:

This report contains the testing and test results performed on M86 APERS Mine packed (12) twelve per PA19 metal ammunition container, (2) two PA19's per wirebound box in accordance with drawing 9366710 for Performance Oriented Packaging Certification. Tests were performed in accordance with Performance Oriented Packaging test regulations.

## 3. TEST:

3a) Containers were dropped once each from 2.1 meters (7 feet) in lieu of Un requirements of 1.2 meters (4 feet). The containers were dropped on a 3 inch solid steel plate reinforced by 18 inches of crushed rock in 6 different orientations. The tests were conducted at 3 temperatures (6 total containers were tested). The orientations were as follows:

Top Bottom Side Side 90<sup>0</sup> off previous Top Edge Bottom Edge

The three temperatures were  $71^{\circ}$  C  $(160^{\circ}$  F),  $24^{\circ}$ C  $(75^{\circ}$ F) and  $-51^{\circ}$ C  $(-60^{\circ}$ F). Note: this exceeds the UN requirement which is 5 containers dropped once each in 5 orientations (top, bottom, long side, short side, and corner) of four feet and ambient temperature.

3b) Stacking tests were done on similar wood boxes with no damage observed. These results could be found in test report DOD POP HM/JWG/TR 87005, entitled: "Performance Oriented Packaging Testing on Wirebound Box."

# 4. RESULTS:

The container passed all tests cited in 3a. None of the contents was lost due to spillage or detonation. They are considered safe for international transportation and in accordance with Performance Oriented Packaging regulations.

### REFERENCE MATERIAL:

- a. United Nations "Transport of Dangerous Goods", Third Edition.b. Report Number: DOD POP HM/JWG/TR 870005, Title: "Performance Oriented Packaging Testing of Wirebound Box.", D. Goodwin, Rochester Institute of Technology.